

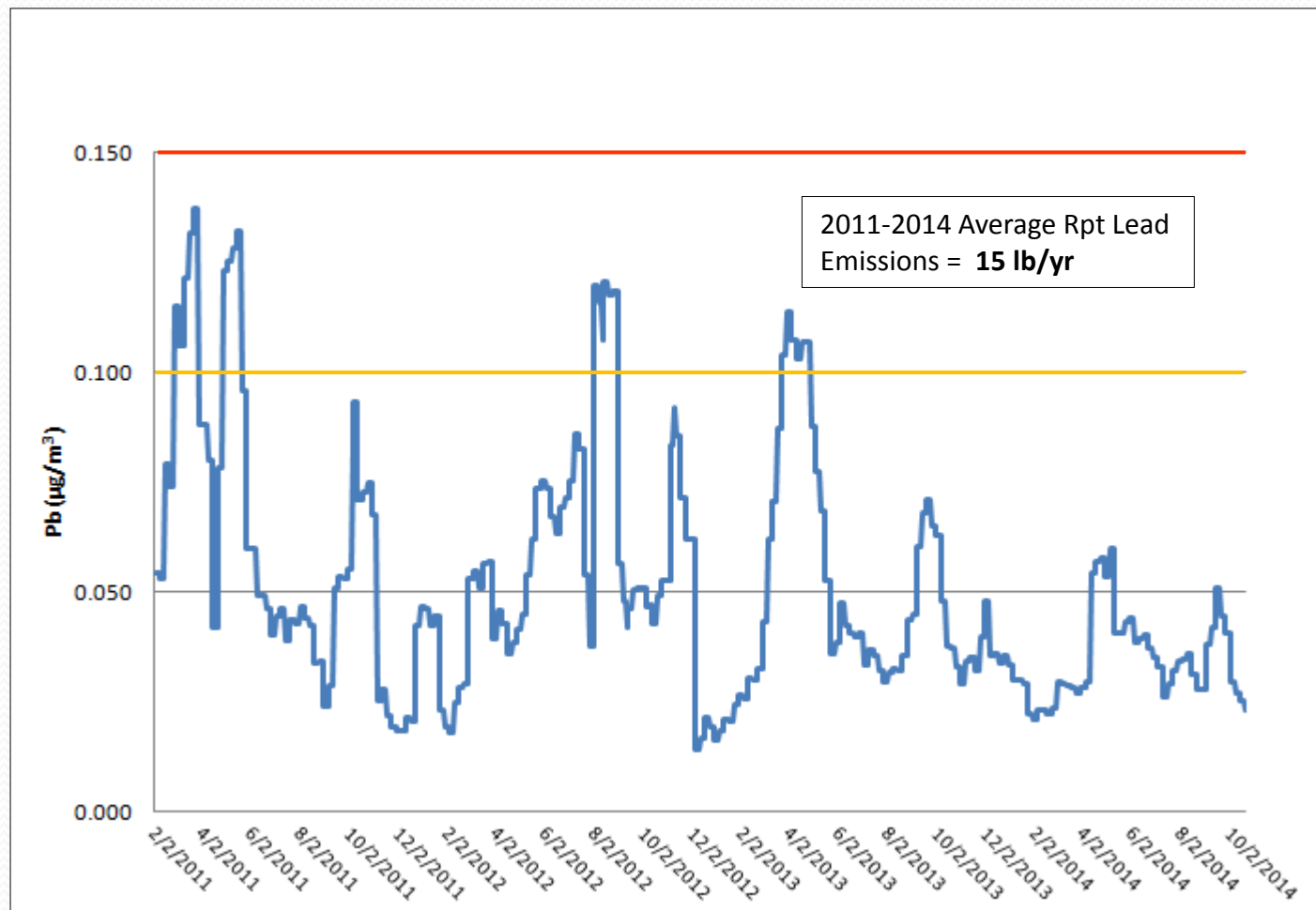
# **Proposed Rule 1420.2 Emission Standards for Lead from Metal Melting Facilities**

**Working Group Meeting #6  
June 18, 2015**

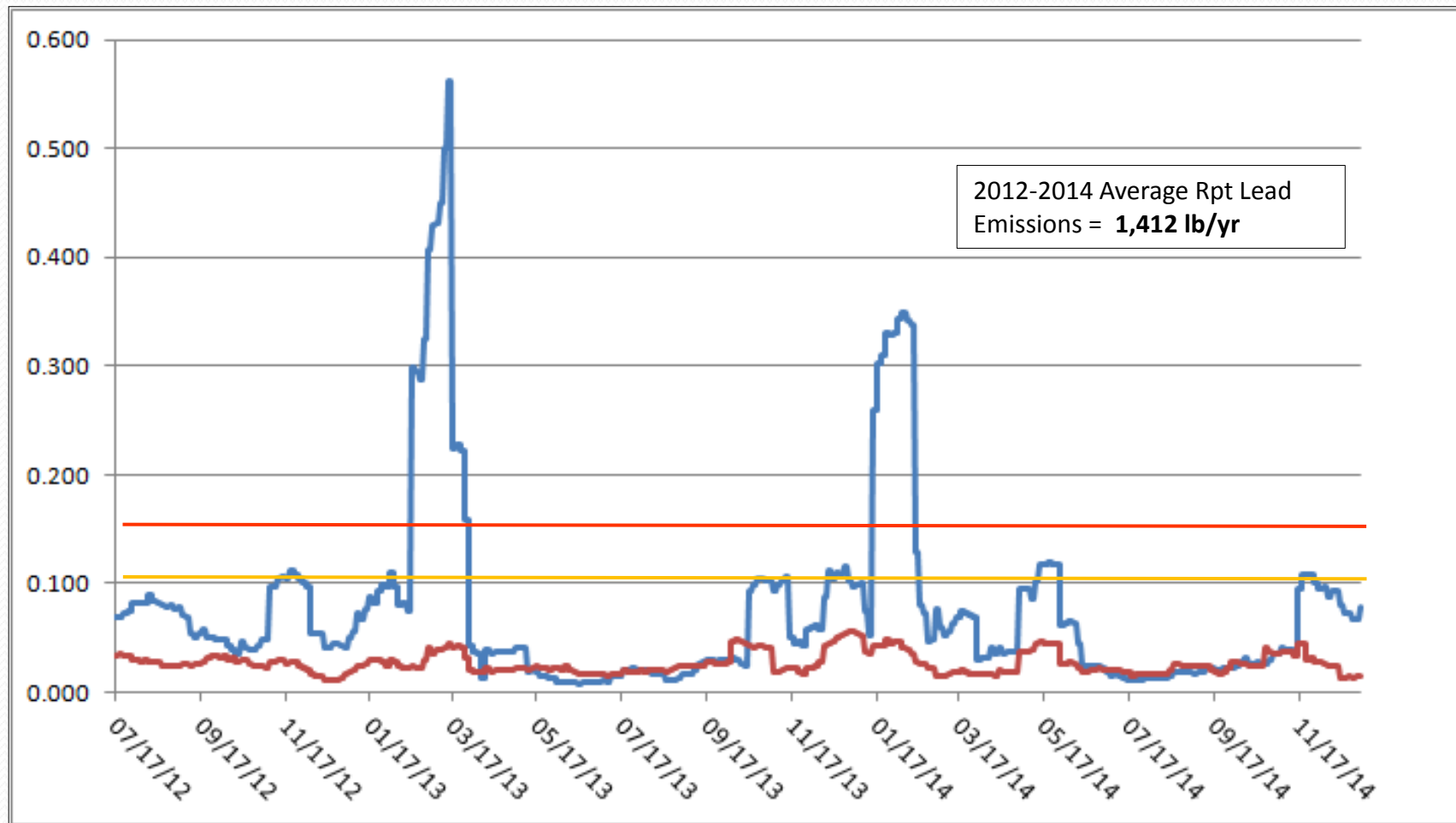
# Rule Development Data

- PR 1420.2 facilities were identified by both available lead ambient air monitoring data and reported lead emissions
  - Some industries with high lead emissions
  - Some industries with ambient air monitoring data
  - All industries commonly melt lead-containing materials using furnaces and either cast leaded products or generate lead-containing waste
- Working group members have requested staff to provide information regarding lead ambient air monitoring data for PR 1420.2 facilities

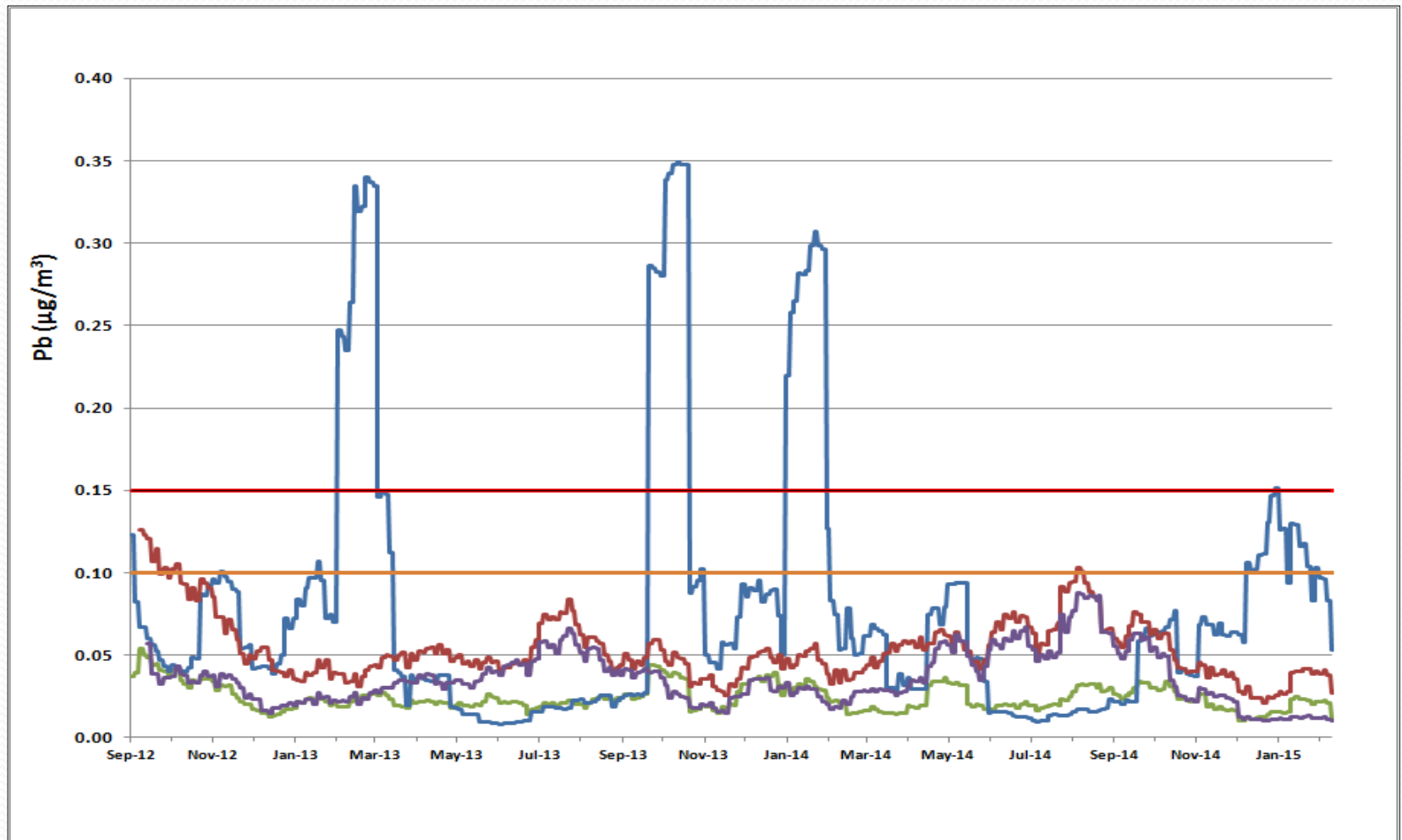
# Trojan Battery – SCAQMD Monitor (2011-2014) (30-day Average)



# GERDAU – SCAQMD Monitors (2012-2014) (30-day Average)



# GERDAU Fence Line Data (2012-2015) (30-day Average)



# PR 1420.2 Approach

## Core Requirements



Ambient monitors

Meet ambient lead concentration limits

- 0.150  $\mu\text{g}/\text{m}^3$ \*
- 0.100  $\mu\text{g}/\text{m}^3$  (Jan 2018)

Building enclosure

Point Source Controls – 99%

Housekeeping and Maintenance

## Compliance Plan Submittal Triggers

Effective Date	Ambient Air Concentration of Lead ( $\mu\text{g}/\text{m}^3$ ), averaged over 30 days	Total Facility Mass Lead Emissions Rate (lbs/hr)
Beginning January 1, 2017	0.120	0.080
Beginning January 1, 2018	0.100	

# Definition- Material Storage and Handling Areas

- Definition for “Material Storage and Handling Areas” was referenced in the total enclosure requirement
- Provision for total enclosures includes “furnace, refining, and casting areas”
  - These three areas includes slag and dross removal from furnaces and furnace charging areas – includes portion of definition
- Removed definition in revised rule language

# Monitoring and Sampling

- Revised requirements for back-up power supply and monitoring frequency to reduce costs
- Back-up Power Supply (e)(12)
  - Require uninterruptible back-up power after first year of monitoring
  - Avoids capital cost for back-up power supply - some facilities will be able to cease monitoring after first year
  - Facilities conducting ambient air monitoring and sampling prior rule adoption must have back-up power supply no later than 30 days after date of rule adoption



# Monitoring and Sampling (Continued)

- Monitoring Frequency (e)(4) and (e)(5)
  - Reduced sampling frequency to 1 in 6 days
  - Daily monitoring required if:

Ambient Lead Limit (over any 30 days)	Effective Date	Applicability
>0.150 $\mu\text{g}/\text{m}^3$	Looks back at 12 months prior to Rule Adoption	Existing Monitors
>0.150 $\mu\text{g}/\text{m}^3$	Beginning 90 days from approval of monitoring plan	New Monitors
>0.100 $\mu\text{g}/\text{m}^3$	Beginning January 1, 2018	Existing and New Monitors

# Revised Monitoring Cost\*

## 1-in-6 days

Three (3) High Volume Samplers	\$21,225	
Three (3) Backup Power Batteries**	<u>\$12,000</u>	= \$33,225
Analyses of (3) Samples	\$10,980	
Filter Cost	<u>\$915</u>	= \$11,895
Labor (5 hours @\$80/hr)	\$33,191	
Reporting (\$1,000 per report)	\$12,000	
Maintenance	<u>\$5,760</u>	= \$50,951
	<b>TOTAL =</b>	<b>\$96,071</b>

\* Based on information from Almega

\*\* PAR 1420.2 does not require backup power for the first 12 months of monitoring

# Revised Monitoring Cost

## Daily

Six (6) High Volume Samplers	\$42,450	
Six (6) Backup Power Batteries	<u>\$24,000</u>	= \$64,450

Analyses of (3) Samples	\$65,700	
Filter Cost	<u>\$5,475</u>	= \$71,175

Labor (5 hours @\$80/hr)	\$198,597	
Reporting (\$1,000 per report)	\$12,000	
Maintenance	<u>\$5,760</u>	= \$216,357

**TOTAL = \$351,982**

# Additional Monitors (e)(2)(E)

- Added provision that allows the EO to add or move monitors if potential exceedances of lead ambient concentration
- Reasons the EO may add or move monitors include, but limited to situations where existing monitoring network is not capturing:
  - Potential fugitive lead dust from storage or handling of materials containing lead such as slag, dross, etc.;
  - Results from a recent source tests; or
  - Physical changes at facility where potential lead sources are moved

# Option to Meet a Total Facility Mass Emission Rate Limit (f)(1)

- Initial source test must demonstrate compliance with 99% control efficiency
- Subsequent source tests may instead meet a total facility emission rate of 0.080 lb/hr
- Will be revising so facilities have to meet to meet 0.080 lb/hr, or the mass emission rate demonstrated at the outlet for the 99% control efficiency test, whichever is lower

# Smoke Test Requirements for Emission Collection Systems (f)(5)

- Added requirement for smoke test to verify pollution control devices are collecting pollutants
- Smoke test required for each emission collection system subject to the rule barring safety issues
- Smoke test must be conducted for each collection system at least once every three (3) months
- Procedures and apparatus for smoke test set-forth in Appendix 2 of the rule

# Total Enclosures – Dates and Enclosure Areas (g)(1)

- Implementation date extended from January 1, 2016 to March 1, 2016
- The following areas shall be enclosed
  - Furnace, refining and casting areas;
  - Lead oxide production areas
- Excluded material storage and handling areas
- Additional revision to add details for cross draft and structural requirements

# Total Enclosure with Negative Air (g)(3)

- Added provision that requires installation of a total enclosure vented to a lead control device if facility:
  - Has a HRA approved by the District after January 1, 2015 that exceeds the action risk level specified in District Rule 1402; and
  - Beginning [Date of Adoption], has exceeded an ambient air lead concentration of  $0.120 \mu\text{g}/\text{m}^3$  averaged over any 30 consecutive days
- Enclosure must be installed two years from approval of the HRA or exceedance of ambient lead concentration, whichever is later
- EO may approve extension of compliance date if:
  - Timely submittal of permits;
  - Delay is due to reasons beyond control of facility; and
  - Request submitted >30 days before compliance deadline



# Housekeeping – Roof tops (h)(1)(A) and (h)(1)(B)

- Reduced frequency for cleaning structures:
  - Structures  $\leq 45$  feet: Frequency reduced from monthly to quarterly (no more than 3 calendar months apart)
  - Structures  $>45$  feet: Frequency reduced from quarterly to semi-annual (no more than 6 calendar months apart)
- Added clarification that roof top cleaning applies to areas where there is potential for generating any amount of fugitive lead dust – does not include storage of raw, unprocessed lead-containing materials or finished lead containing products

# Housekeeping – Paving Landscaped Areas (h)(3)

- Modified paving requirement to allow the following exceptions for paving facility grounds used for plant life
- Allow plant life for areas greater than 100 square feet if required by:
  - City permits; or
  - State Water Control Board
- Allow use of dust suppressants approved by the Executive Officer for controlling lead containing dust from slag, lead containing waste, etc. (h)(5)

# Housekeeping – Storing and Transporting Materials and Vacuum Sweeping

- Storing and transporting materials (h)(5) & (h)(6)
  - Allow use of dust suppressants approved by the Executive Officer for controlling fugitive lead dust from slag, and other waste generated from housekeeping and maintenance activities for storage and transport
  - Transport requirements do not apply to materials infeasible for implementation of control measures due to extreme temperature of materials
- Vacuum Sweeping (h)(7)
  - Revised frequency of sweeping to once per shift, instead of three times per day
  - Some facilities may operate one or two shifts or not operate on weekends

# Compliance Plan-Requirements for Additional Point Source Controls (m)

- If compliance plan is triggered and emission rate is  $>0.080$  lb/hour – must implement lead measures to reduce lead point source emission rate
- Added provision that would not require installation of additional controls if:
  - Installation of additional controls are already underway;
  - Installation of additional controls are for the lead point source that caused the ambient air lead concentration exceedance; and
  - $< 90$  days have passed since initial operation of additional controls

# Visible Emissions (o)

- Added provision that facilities shall not discharge into the atmosphere fugitive lead-dust emissions that exceed for more than a 3-minute aggregate in any 60-minute period, a:
  - Ringlemann 0.5; or
  - 10 percent opacity
- Existing provision of Rule 1420

# Exemptions (o)

- Added provision to exempt low lead emitting equipment (n)(2)
  - Exempts lead point sources with an uncontrolled emission rate  $\leq 0.005$  lb per hour from demonstrating 99% control efficiency
  - Must conduct source test every 24 months
- Lead Minimization
  - Exempt facilities melting  $<50$  tons of lead per year
  - Lead melting limit must be specified in permit conditions and lead processing records
  - Facility is subject to Rule 1420

# Status of Socioeconomic Report

- Staff currently assessing cost data related to rule requirements that could result in additional costs
- Rule requirements/measures that could result in additional costs include:
  - Ambient air monitoring
  - Point source emission control
  - Total enclosures
  - Housekeeping (i.e., roof cleaning, storage area cleaning, incidentals, soil stabilization, building inspections, etc.)
  - Maintenance activities
  - Source tests
  - Recordkeeping
  - Ambient air monitoring reports
  - Compliance plan

# Schedule

- Set Hearing – July 10, 2015
- Board Hearing – September 4, 2015

Staff Contact:

Eugene Kang  
(909) 396-3524  
[ekang@aqmd.gov](mailto:ekang@aqmd.gov)

Dan Garcia  
(909) 396-3304  
[dgarcia@aqmd.gov](mailto:dgarcia@aqmd.gov)